

**A STUDY OF THE AGRICULTURAL INCOME
OF MAHARASHTRA. 1951 - 52 TO 1958 - 59**

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(iii)

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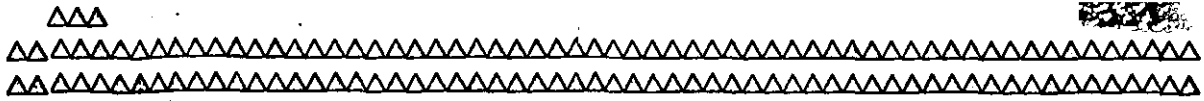
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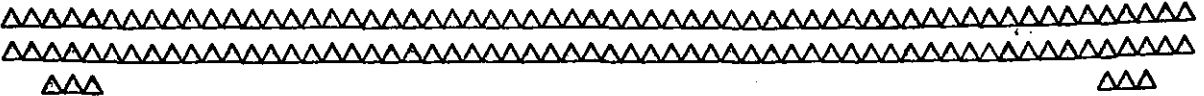
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I N T R O D U C T I O N

An attempt is made in this study to estimate the agricultural income of Maharashtra by districts. It is not the purpose of this effort to indicate the rate of growth in the agricultural sector in either Maharashtra or separately in the different districts over the period selected. The object is to analyse the structure of Maharashtra's agricultural income as it evolved in the years 1951-52 to 1958-59. When variations in the growth rate are the focus of enquiry it would be essential to estimate income or product at constant prices. However estimates at current prices would be quite useful for the purpose in view here. After all what is described as income at current prices represents the income actually distributed among the productive resources concerned from year to year over the period in question.

It needs to be explained at this stage as to what we mean by the structure of agricultural income. Given the method of estimation employed in this study income from agriculture turns out to be the sumtotal of the value of crops and byproducts. It will be observed later that the owners of productive resources among whom the total

value of crops and byproducts is distributed are in most cases likely to be the residents of the region in which the productive agricultural activity occurs. This would be particularly so when the region in view is the whole State rather than a district within a State. In such a case it may be meaningful to characterise the aggregate value of crops as income accruing mostly to a group of persons roughly classifiable as a distinct section known as 'agriculturists', and to study the distribution of this income among the different groups within this section. No attempt is made here to highlight this aspect of the composition of regional agricultural income.

However, the value of crops and byproducts in Maharashtra is built up district by district. One then gets the distribution of Maharashtra's agricultural income by districts. This also is a matter of composition--or, we may say, structure--of the region's agricultural income. We limit ourselves to a study of structure in this sense. The attempt then is to focus attention on the inter-district diversities within Maharashtra viewed over a period of eight years.

Further, we obtain for every district the division of its agricultural income by at least the more important crops. It is then possible to analyse the differences

between districts not merely with reference to income from agriculture as a whole but also to income separately from the principal crops. In this connection attention is confined only to diversities in respect of income from foodgrains and that from cashcrops. It is true that the measures being used for comparison here have their limitations, but these limitations may be characterised, borrowing a phrase from Kuznets, as "qualifications, not negations, of the significance of the measures."¹

In addition to elucidating the structure of the agricultural income of Maharashtra it is also a purpose of this study to analyse the sources of data available for making estimates for Maharashtra. At the all-India level the National Income Committee (NIC) analysed at length the sources of data available in the early fifties. In a recent publication, viz. "National Income Statistics -- Proposals for a revised series of National Income Estimates for 1955-56 to 1959-60" (1961)² the Central Statistical Organisation (C.S.O.), Government of India made an elaborate analysis of the sources of data that

¹ Simon Kuznets : 'Some Conceptual Problems of Measurement', in Bernard Okun and Richard W. Richardson (edt.) : Studies in Economic Development (Holt, Rinehart and Winston, 1964), p. 241.

² This publication will be referred to hereinafter as NIS.

have eventually become available for estimation of the income of the whole country. However, the various State Bureaus which estimated income of the respective States merely applied the methods used by the NIC without subjecting to special scrutiny the existing sources of information from the particular points of view of the States concerned. The general practice has been just to mention the sources of information without commenting on the extent of coverage and reliability of the information furnished in the sources. In particular, in the case of prices to be used for evaluation it is necessary to explain the type of data required and make a selection in the light of this explanation. We find the different State Bureaus using diverse kinds of prices for evaluating the agricultural output, and still hardly any of the Bureaus has indicated the reasons for using one kind of price rather than another. In the estimation of regional income in India an analysis of the sources of data from the point of view of the region concerned appears to be necessary.

Maharashtra is composed of areas which belonged previously to three different States, viz., Bombay, Madhya Pradesh and Hyderabad. As such there is some diversity in the sources of data which needs to be considered. Further, as we shall see, there are some differ-

ences in data for the different districts in respect of coverage and reliability. Then again, the adjustment of boundaries of a few of Maharashtra districts would also raise problems of reliability. It is therefore intended to examine the sources of data from the points of view of scope and reliability, and indicate methods of adjusting the data in order to obtain the maximum possible accuracy in estimates.

In Chapter I we consider briefly the significance of the concept of national income itself. A view that the concept of national income in vogue in advanced countries is not quite relevant in an underdeveloped country, is examined in this context. Clearly if this view were correct the work of income estimation in underdeveloped countries would be rendered meaningless. We however conclude that the basic argument urged in favour of this view does not appear to be convincing. Further, in this chapter we indicate some special aspects of the concept of regional income as contrasted with that of national income, and then explain why we shall be opting for a series of gross, rather than net, income in agriculture for the purpose of this study.

Chapter II spells out some of the issues that arise in connection with the estimation of the agricultural

income of Maharashtra. One such issue relates to changes in district boundaries. It will be seen that though some 'correction' of available data would be necessary to allow for these changes, there is reason to believe that the possible margin of error that may be introduced in our estimates due to the need for adjustment of data is likely to be quite small. In the next place, the choice of a specific period viz., 1951-52 to 1958-59, for study is explained, and reasons are given for estimating and analysing income only in the agricultural sector of Maharashtra. The problem of estimational method raises an additional issue. Though in U.S.A. the techniques of allocating State totals among counties have been used to some extent, the method of apportionment is found to be of little value for the present study. Finally, we consider one aspect of the reliability of estimates, viz., reliability of estimates for Maharashtra as compared to those for the whole country. It is concluded that in all probability estimates for Maharashtra are likely to have an edge of superiority over those for India in point of reliability.

As a step towards estimation of agricultural income we must obtain area and outturn of crops in the districts. Since it is customary to divide the twenty-six districts of Maharashtra into four broad regions, viz. Konkan,

Deccan, Vidarbha and Marathwada, we consider the problem of estimation of area and outturn of crops separately in the four regions. Chapter III analyses the sources of data on area and outturn of crops in Konkan and Deccan districts as most of these sources are common to these two regions. Data are available for a wide variety of crops. Though the estimates based upon these data are not likely to be reliable in equal degree for all the districts it appears that the degree of reliability is quite large for the districts concerned. In Chapters IV and V we estimate area and outturn of crops as also the outturn of byproducts respectively in Konkan and Deccan districts. Adjustments in data are made to account for alterations in the boundaries of Thana district in Konkan and Dhulia in Deccan. As will be seen later no adjustment is called for in ^{the} case of Kolhapur in Deccan.

Chapter VI deals with the sources of data on area and outturn in Vidarbha districts. In respect of coverage and reliability of data used we reach for Vidarbha districts a conclusion broadly similar to that for Konkan and Deccan districts. In Chapter VII the area and outturn of crops in Vidarbha districts are estimated taking into account the enlargement of one of the Vidarbha districts in 1959, viz. Chanda. Similar estimates for Marathwada districts on the basis of an analysis of sources

of data are attempted in Chapter VIII. While preparing these estimates we take note of the fact that two of the Marathwada districts, viz., Nanded and Osmanabad, underwent some change in boundaries.

In Chapter IX we turn to the estimation of the gross income in the agricultural sector in the different districts of Maharashtra. The initial problem that has to be faced is the type of prices data that need to be used for evaluation of the agricultural output. We give reasons for opting in favour of data on farm (harvest) prices. From the point of view of availability of prices data we can divide the crops into three categories :

(i) those for which year-to-year data are available, though with some gaps, (ii) those for which, though the relevant data are not there, we have some scattered data for a few of the years which have to be adjusted to yield the type of information we require, and (iii) those for which no prices data whatsoever are to be obtained. In addition there are the byproducts.

In the case of data on prices of crops coming under (i) the main problem we face is that relating to gaps in information. We make a distinction between what we characterise as a 'district gap' and as a 'year gap'. Methods are suggested for handling separately the two

types of gaps. We then consider the problem of obtaining value of crops coming under (ii) and (iii). In the case of residuary crops falling under (iii) it is customary to estimate the value on the basis of an assumed value yielded per acre. It is not proper to just copy the formulae on per acre values used at the all-India level by the NIC or C.S.O. For the more important residuary varieties in any case an attempt is made to derive value per acre by postulating a relationship between value per acre of some main crop and that of the residuary category, in determining which use is made of some scanty data on prices of the relatively important item under the respective residuary categories in Maharashtra districts. Finally, the methods of evaluating the outturn of by-products are specified.

Chapter X analyses the structure of agricultural income by districts as estimated in Chapter IX. Chapter XI makes a review of Maharashtra's agricultural income on the basis of analysis and results of the earlier chapters.

The body of the text is followed by a few Appendices. Appendix I gives the meaning of the different abbreviations used in the thesis. In Appendix II we give in one place the districts respectively in the four regions of Maharashtra, i.e. Konkan, Deccan, Vidarbha and Marathwada.

Appendices III, IV and V show income per acre under cotton, groundnut and tobacco respectively. The relevant income per acre is estimated for the purpose of deriving the value of average yield per acre under the corresponding residuary variety such as fibres, oilseeds, or drugs and narcotics. The data on income per acre of the three cashcrops are provided by way of appendices merely for information. As the three crops (cotton, groundnut and tobacco) were of little consequence in Konkan districts, no data for these districts are given in the three appendices. In the same way in the case of each crop a district in which the crop was not grown is evidently left out of the relevant appendix. Finally, an attempt is made in Appendix VI to discover the extent to which the ranking of districts made in Chapter X is influenced by the fact of differences in the price of a crop in the several districts in any year. This is done by evaluating a district's outturn of major crops in 1951-52 and 1958-59 respectively at the weighted average prices in Maharashtra as a whole.